US007806651B2

(12) **United States Patent**
Kennepohl et al.

(10) **Patent No.: US 7,806,651 B2**
(45) **Date of Patent: Oct. 5, 2010**

(54) **METHOD FOR DESIGNING A LOW-PRESSURE TURBINE OF AN AIRCRAFT ENGINE, AND LOW-PRESSURE TURBINE**

(75) Inventors: **Fritz Kennepohl**, Unterschleissheim (DE); **Detlef Korte**, Munich (DE)

(73) Assignee: **MTU Aero Engines GmbH**, Munich (DE)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 771 days.

(21) Appl. No.: **11/547,581**

(22) PCT Filed: **Mar. 11, 2005**

(86) PCT No.: **PCT/DE2005/000435**

§ 371 (c)(1),
(2), (4) Date: **Jun. 25, 2007**

(87) PCT Pub. No.: **WO2005/100750**

PCT Pub. Date: **Oct. 27, 2005**

(65) **Prior Publication Data**

US 2008/0022691 A1 Jan. 31, 2008

(30) **Foreign Application Priority Data**

Apr. 2, 2004 (DE) 10 2004 016 246

(51) **Int. Cl.**
F01D 25/00 (2006.01)

(52) **U.S. Cl.** **415/119**; 415/199.5

(58) **Field of Classification Search** 415/119, 415/199.5

See application file for complete search history.

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Primary Examiner—Ninh H Nguyen
(74) *Attorney, Agent, or Firm*—Davidson, Davidson & Kappel, LLC

(57) **ABSTRACT**

A low-pressure turbine of a gas turbine is disclosed. The turbine comprises a number of stages arranged one behind the other in an axial manner in the flow-through direction of the turbine. Each stage is formed from a fixed vane ring having a number of vanes and from a rotating blade ring having a number of blades. Each stage is characterized by a characteristic value vane-to-blade ratio that indicates the ratio of the number of vanes to the number of blades within a stage. One of the stages of the turbine is designed in such a manner that, in the event of noise-critical conditions of the turbine, the characteristic value vane-to-blade ratio of this stage is between a lower cut-off limit for mode k=−1 of the blade-passing frequency (BPF) of said stage and an upper cut-off limit for the mode k=−2 of the blade-passing frequency (BPF) of this stage.

13 Claims, 2 Drawing Sheets